

PATENT
10/023,969
Docket 084/002

CLAIM AMENDMENTS

- A² corrected*
1. (*Currently amended*) A replication ~~conditional~~ competent virus with a genome comprising adenovirus replication genes, at least one tissue or tumor specific transcriptional control element, and an encoding region from at least one heterologous gene that replaces a function of the adenovirus E1a gene.
 2. (*Original*) The virus of claim 1, which is a cytolytic virus.
 3. (*Original*) The virus of claim 1, wherein the heterologous gene is selected from Y-box transactivators, the immediate early genes of cytomegalovirus (CMV), and the oncogenes of human papillomavirus (HPV).
 4. (*Original*) The virus of claim 3, wherein the heterologous gene is YB-1.
 5. (*Original — Withdrawn*) The virus of claim 3, wherein the heterologous gene is CMV IE1 or CMV IE2.
 6. (*Original — Withdrawn*) The virus of claim 3, wherein the heterologous gene is HPV E6, or HPV E7.
 7. (*Currently amended*) The virus of claim 1, wherein the heterologous gene (~~or another gene required for replication or assembly of the virus~~) is under control of a the tissue or tumor specific transcriptional control element.
 8. (*Currently amended — Withdrawn*) The virus of ~~claim 7~~ claim 1, wherein the transcriptional control element is a tissue specific promoter, which is a promoter for albumin, α -fetoprotein, prostate-specific antigen (PSA), mitochondrial creatine kinase (MCK), myelin basic protein (MB), glial fibrillary acidic protein (GFAP), or neuron-specific enolase (NSE).
 9. (*Currently amended*) The virus of ~~claim 7~~ claim 1, wherein the transcriptional control element is a tumor specific promoter, which is a promoter for telomerase reverse transcriptase (TERT), carcinoembryonic antigen (CEA), hypoxia-responsive element (HRE), *Gp78*, L-plastin, or hexokinase II.
 10. (*Original*) The virus of claim 9, wherein the promoter comprises at least 25 consecutive nucleotides in SEQ. ID NO:1.

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- As
concluded.
11. *(Original)* A host cell containing the virus of claim 1.
 12. *(Original — Withdrawn)* A method for selecting a virus according to claim 1, comprising transducing a host cell with a virus lacking an adenovirus gene required for replication or assembly, but comprising a heterologous gene; and determining whether replicated virus is produced by the cell
 13. *(Currently amended — Withdrawn)* A method for killing a cancer cell, comprising contacting the cell with the virus of ~~claim 7~~ claim 1.
 14. *(Original — Withdrawn)* A method for killing a cell expressing telomerase reverse transcriptase (TERT), comprising contacting the cell with the virus of claim 10.
 15. *(Original — Withdrawn)* The method of claim 13, wherein the cancer is lung cancer, pancreatic cancer, medulloblastoma, cervical carcinoma, fibrosarcoma, or osteosarcoma.

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16. (New) A replication conditional virus with a genome comprising adenovirus replication genes, at least one tissue or tumor specific transcriptional control element, and at least one heterologous gene that replaces a function of the adenovirus E1a gene,
wherein the heterologous gene is selected from Y-box transactivators, the immediate early genes of cytomegalovirus (CMV), and the oncogenes of human papillomavirus (HPV).
17. (New) A replication conditional virus with a genome comprising adenovirus replication genes, at least one tissue or tumor specific transcriptional control element, and at least one heterologous gene that replaces a function of the adenovirus E1a gene,
wherein the heterologous gene is YB-1.
18. (New — Withdrawn) The virus of claim 16, wherein the heterologous gene is CMV IE1 or CMV IE2.
19. (New — Withdrawn) The virus of claim 16, wherein the heterologous gene is HPV E6, or HPV E7.
20. (New) The virus of claim 16, wherein the heterologous gene is under control of the tissue or tumor specific transcriptional control element.
- 93 21. (New — Withdrawn) The virus of claim 16, wherein the transcriptional control element is a tissue specific promoter, which is a promoter for albumin, α -fetoprotein, prostate-specific antigen (PSA), mitochondrial creatine kinase (MCK), myelin basic protein (MB), glial fibrillary acidic protein (GFAP), or neuron-specific enolase (NSE).
22. (New) The virus of claim 16, wherein the transcriptional control element is a tumor specific promoter, which is a promoter for telomerase reverse transcriptase (TERT), carcinoembryonic antigen (CEA), hypoxia-responsive element (HRE), Grp78, L-plastin, or hexokinase II.
23. (New) The virus of claim 22, wherein the promoter comprises at least 25 consecutive nucleotides in SEQ. ID NO:1.
24. (New — Withdrawn) A method for killing a cancer cell, comprising contacting the cell with the virus of claim 23.
25. (New — Withdrawn) A method for killing a cell expressing telomerase reverse transcriptase (TERT), comprising contacting the cell with the virus of claim 10.